

# W5YI

America's Oldest Ham Radio Newsletter

## REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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June 1, 2001

## Dayton HamVention Celebrates its 50<sup>th</sup> Anniversary!

The Dayton HamVention, the largest ham radio event in the world, celebrated their 50th annual edition at the Hara Arena Conference and Exhibition Center May 18 to 20, 2001. The first HamVention took place in 1952.

According to the Dayton Amateur Radio Association, estimated attendance was in the 27 to 28,000 range ...down somewhat from last year. The decreased attendance could be accounted for by the poor weather. After four years of beautiful weather, the rains came to Dayton on Friday and Saturday drowning out the flea market. That plus the fact that Amateur Radio was given a big boost last year by the FCC's restructuring of the service. Our imperfect survey of exhibitors indicated that sales were generally less than last year.

The various DARA committees under the able leadership of General Chairman Jim Graver, KB8PSO did their usual superlative job in staging the annual event.

The Saturday evening HamVention banquet was held at the E. J. Nutter Center on the campus of Wright State University in nearby Fairborn, Ohio. For the first time in recent memory, there were last minute tickets available. Master of Ceremonies was Carl Nichols, N8WFO who is also the Chief Meteorologist for WDTN 2News in Dayton.

**Peter Martinez, G3PLX** was presented the *Technical Excellence* award. He is recognized as the "father" of PSK31, a new mode of HF digital

communication. Non-existent just 3 or 4 years ago, PSK31 has revitalized interest in HF digital modes.

**Frank Bauer, KA3HDO**, captured the *Special Achievement* award for his countless hours of behind-the-scenes ham radio involvement in the SAREX (space shuttle) and ARISS (International Space Station) programs.

**George Jacobs, W3ASK**, was honored as the *Amateur of the Year* for 2001! George, a broadcast engineer by trade, has authored hundreds of technical articles on short-wave broadcasting and has been Propagation Editor for CQ Magazine for 50 years.

Banquet speakers: Bob Heil K9EID, Riley Hollingsworth K4ZDH and Roy Neal K6DUE spoke on the topic "Amateur Radio, Past, Present and Beyond." The after banquet entertainment featured country music artist Jim Whitter and jazz vocalist Jude Johnson of Hamilton.

As usual, Dayton featured dozens of excellent educational programs covering every amateur radio subject imaginable. Held on Sunday morning, the well attended FCC Forum featured William Cross W3TN and Riley Hollingsworth K4ZDH

### FCC Forum

William Cross began by saying "On the air, I'm W3TN. Off the air, I'm the contact person in the Wireless Telecommunications Bureau's for the Amateur and Personal Radio Services."



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- "Exam volume is still going strong. From what the VECs have reported, about 67,000 people have upgraded since January, 2000."

- "Last year (2000) was a pretty quiet year for the amateur service on the regulatory front. It should have been because 1999 was one of the busiest years we have had in a long time."

- "I want to dispel the notion that the Public Safety and Private Wireless Division is the only unit in the Commission that has an impact on the Amateur Service. Nothing could be further from the truth. The Amateur Service is affected by the *Office of Engineering and Technology*, the *International Bureau*, which is involved with World Radio Conferences such as the one that occurred in Istanbul, and the *Office of the Managing Director*. These Bureaus and Offices are going to have a great impact on the Amateur Service over the next few years-maybe even a greater impact than the Wireless Bureau."

- "On January 19<sup>th</sup>, former Chairman Kennard resigned. Commissioner Michael K. Powell was asked to become the new Chairman. The remaining 3 commissioners have announced they are leaving, too. Commissioner Ness leaves June 1. The others have not announced their departure dates. The White House has nominated individuals to fill the four commissioner positions."

"As of May 1, no one has yet had their confirmation hearing, or been confirmed. We expect the new commissioners will come onboard this summer. Until then, the Commission is in a period of transition. This situation is no different than any other year when we have an election and the party in the power changes. The FCC is still open for business as it must be under the law, but the Commission next year will be very different than the Commission last year."

"The FCC, under Chairman Powell, will focus on core issues of agency organization, enforcement and spectrum management, according to his chief of staff. A fundamental question for the Commission is whether it is time for wholesale reorganization of the agency along operational lines. A Licensing Bureau that would handle that function across all services is one idea"

"[There is] speculation that the Commission may combine cable, broadcasting and satellite TV regulation in one overall TV bureau, instead the three separate bureaus currently responsible for these services. Time will tell. ..."

"When asked if he saw a stronger role for the FCC anywhere, Chairman Powell responded: 'In a nutshell, no' and he said 'You will find me to be much less quasi-legislative' than previous Commissions. He also described the most important goal of the FCC under his tenure as focusing on operational issues, such as running an efficient, well-managed and decisive organization."

"The Commission is dealing with the most fundamental changes in the communications industry-mergers, competition and deregulation in telephones, DTV transition in television, modem and interactive services in cable, wireless Internet and digital services, consumer accessible satellite service, broadband everywhere, and on and on."

"Did you notice that the merits of communications via Morse code, or any other mention of telegraphy, was not in the list of fundamental changes? Morse code just isn't a big deal to the FCC anymore."

"What this means for ham radio's regulatory future, or where it will end up in a reorganized FCC, I do not know. But I do know this: Detailed regulation of the nitty-gritty of communication services, including the Amateur Services, is not in the picture. Rather, the FCC is shifting to strong and effective enforcement of truly necessary regulations."

"I mentioned this so you have an idea about what the landscape is like in which ham radio is competing for attention at the Commission."

- Turning to the regulatory stuff, the big amateur service Commission action that came out since last Ham-Venture was the *Memorandum Opinion and Order* in WT Docket No. 98-143 ...the proceeding that amended the amateur service operator license requirements and structure. Most of you refer to it as the Amateur Service license structure proceeding."

"This proceeding started in August, 1998 as one of the first group of biennial review proceedings. The *Report and Order* came out December 30, 1999, and many of you took off to the nearest store or 800 number to order study guides to get what you have always wanted - that General or Amateur Extra Class operator license."

"We received five petitions for reconsideration of the *Report and Order*. The petitions for the most part asked that we revisit certain issues decided in the *Report and Order*."

"One petition requested that we upgrade the license of individuals who held a Class A operator license prior to 1951 to an Amateur Extra Class operator license. The petitioner wanted Class A licensees returned to their 1951 top amateur operator license status."

"Three petitions requested that we reconsider the decision not to maintain a database of Technician Class operator licensees who have passed a five words-per-minute telegraphy examination. They were concerned about increased enforcement problems for the Commission and you all being able to determine if a station licensed to a Technician Class operator heard operating in 200 kHz of the 10 meter band is authorized to be there."

"One petitioner wanted us to reconsider our decision to reduce the telegraphy examination requirement to the minimum requirement that meets the Radio Regulations."



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"Another group of petitioners requested that we reinstate the requirement that an individual pass a twenty word-per-minute telegraphy examination requirement for the Amateur Extra Class operator license. According to this group, 20 wpm '...is only a barrier to unmotivated individuals.'"

"The ARRL requested that we standardize examination element credit to provide lifetime telegraphy exam credit to any person who provides proof of having passed at one time an FCC-recognized five wpm telegraphy examination."

The only change that the Commission made to its earlier decision was to reflect that the Technician Plus Class operator license was the previous class of license an individual held when we renew a Tech plus operator license as a Technician Class operator license. The other issues raised were considered in the *Report and Order* and were denied. We also made a couple of minor editorial changes in the rules."

- "How you all have responded to the new license structure has been pretty amazing. The change in the number of licensees in each license class:

| License Class | Jan. 2000     | April 2001    | Difference  | Percent Increase |
|---------------|---------------|---------------|-------------|------------------|
| Extra Class   | 75428         | 94923         | 19495       | 25.8%            |
| Advanced      | 103360        | 88192         | -15168      | -14.7%           |
| General       | 110201        | 136291        | 26090       | 23.7%            |
| Tech Plus     | 133153        | 96219         | -36934      | -27.7%           |
| Technician    | 202814        | 224978        | 22164       | 10.9%            |
| Novice        | 51762         | 43961         | -7801       | -15.1%           |
| <b>Total:</b> | <b>676718</b> | <b>684564</b> | <b>7846</b> | <b>1.2%</b>      |

"The Amateur Extra-Class has gained almost 20,000 licensees since restructuring was announced, the General Class is up 25,000 licensees, and the Technician Class is up 22,000 licensees. Advanced, Novice and Tech + have lost 65,000 licensees. Many of those "lost" really are licensees who upgraded, so they are not a "loss" to amateur radio."

"With regard to the Novice Class, there were 93,634 Novices in 1991 according to the Callbook. Ten years later we are down to less than 44,000. And the number of Novice Class licensees is falling by about 6,000 per year. By the time we get around to rules that 're-farm' the Novice bands, any hand-wringing about somebody getting a windfall of privileges or something for nothing may well be academic; there may not be any Novices left to get that something."

"The data also shows that overall, we aren't attract-

ing a lot of new people into ham radio. Growth over the 15 month period was about 1% per year."

"What about the future? Keep in mind that my crystal ball is as cloudy as yours. From where I sit, I believe the trend toward more Technician, General and Amateur Extra Class licensees will continue because Tech Plus and Advanced Class licensees will continue to get back into ham radio and upgrade."

"I don't see any one factor that is going to bring in new people. The ARRL has its 'Big Project' and that looks very promising – the idea is that if you integrate ham radio into middle school science education, middle schoolers can't avoid it, they will become interested, and become licensees."

- The other item that affected you this past year was a change in the way Club, RACES and Military Recreation station applications are handled. Beginning January 22, 2001, these applications are processed by a Club Station Call Sign Administrator (CSCSA). These administrators are amateur radio organizations that have tax-exempt status under a section of the Internal Revenue Code and that have agreed to provide voluntary, uncompensated and unreimbursed services for processing applications for club, military recreation and RACES station licenses."

"They have agreed to submit applications to us in an electronic batch file, to retain the application information for at least 15 months, and to make the application information available to us upon request. The CSCSAs may collect all necessary information in any manner of its choosing, including creating its own forms. There are 3 of these CSCSAs. They are the ARRL, W4VEC, and the W5YI-VEC."

- "That's about all of consequence that has happened since the last Hamvention. But that's not the end of the story. There's a lot coming in the next couple of years that you need to watch, know about, and get your ideas into."

"First, there are regulatory items that other bureaus, particularly our *Office of Engineering and Technology* are working on. These include new technologies such as software defined radios, or SDRs, and ultra wideband technologies UWB). SDRs may have a big impact on a fundamental tenant of regulation—that radio services can be classified and regulated as discreet services. SDRs have the potential to eliminate any hardware distinction between services that share adjacent or nearby spectrum."

- "Second, the *Office of Managing Director* is trying to get systems in place that meet its requirement to comply with other statutes. This is the office that is responsible for the *Federal Registration Number* or FRN program."

"The Wireless Telecommunications Bureau also

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## COMMERCIAL PART 15 DEVICES OPERATE ON HAM BANDS

Part 15 low-power intentional radiators can operate on just about any frequency ...including the ham bands. These low-power intentional radiators are limited to specific field strengths that vary with frequency. The field-strength limits for industrial devices operating in the 70-cm ham band are limited to 200 microvolts/meter measured at 3 meters.

Code-Alarm, Inc., (Madison Heights, MI) makes automotive electronic devices. One of their remote car security Part 15 devices is set to operate on 433.97 MHz, right in the middle of the Amateur 70-cm ham band. The firm had just recently changed to 433.97 from 315 MHz. You can see Code-Alarm's devices on the Web at: <[www.codl.com/](http://www.codl.com/)>.

Chris Oesterling N8UDK, Clawson, Michigan was retransmitting Space Shuttle audio on 434 MHz (which is authorized) and was interfering with Code-Alarm's keyless automobile entry and remote starting systems. These devices are small cube-shaped push button gadgets that go on car key chains. Code-Alarm made a formal complaint to the FCC and Chris was asked to shut down his transmitter.

After checking the rules, however, FCC's Pat Patterson called Chris back notifying him that the interference was Code-Alarm's problem. Amateur Radio has priority in the 420-450 MHz band over Part 15 and one of the conditions for getting an FCC ID for the device is to accept all interference from other services as well as not interfering. Pat Patterson confirmed to N8UDK that he was well within the FCC Rules and OK'd turning the Space Shuttle retransmissions on 434.0 MHz back on.

Pat Patterson asked if Chris could talk to the engineer at Code-Alarm, which he did. The engineer apparently was not aware of the ham band and that radioamateurs could run over 1 KW if they wanted to, much more than the 32 watts that Chris was running. (Thanks, Tom O'Hara, W6ORG)

- **The ARRL has again asked the FCC to create a primary domestic Amateur Radio allocation at 2300-2305 MHz.** Amateurs now are secondary there. The ARRL first asked the FCC in 1996 to upgrade the allocation there to primary. The ARRL said the segment is important to the Amateur Service, especially for weak-signal communications and propagation research, including beacon operation, due to the low noise levels in that band.

The ARRL originally asked the FCC to consider creating the primary 2300-2305 MHz allocation when it filed comments in response to the FCC's proceeding to allocate spectrum below 5 GHz transferred from federal government use and set aside for auction to help balance the budget (ET Docket 94-32). Amateurs "need and should be afforded protection from" commercial users at 2300-2305 MHz, the ARRL concluded. The FCC has not yet put the ARRL's petition on public notice.

## PRINCIPALITY OF SEALAND TO OPERATE SECURE WEBSITES

*"Free communication can never be a crime, and by itself can never hurt anyone. Criminal acts should be pursued at the point where the act takes place, not on the common carriers that enable all individuals to do business freely, such as telephone and Internet infrastructure providers, road and transportation departments and even water and power companies for providing these essential services. The fact that public roads may be used to transport stolen goods does not justify a stop and search of vehicles at every corner.*

*"HavenCo, in conjunction with the Government of Sealand, believes in the Philosophy of Contract Autonomy, as opposed to the Philosophy of Regulation. Our belief is that individuals and groups engaging in unsavory activities will be publicly admonished in a world where communications are free. This includes distasteful actions by governments, corporations, organizations as well as individuals." (from HavenCo.com.)*

The music and movie entertainment industry wants ISP's (Internet Service Providers) to be responsible for the file-sharing piracy actions of their subscribers. But new stealth platforms are emerging that make it impossible for ISP's to detect copyrighted file-sharing. These systems "hide" online data collection and transfer by scrambling information making it impossible for ISPs to police the activities of their users.

By far the most exotic of these operations is Havenco.com which is locating its servers to the sovereign *Royal Principality of Sealand*. Sealand is a man-made island fortress in the North Sea off the coast of Great Britain, France and Germany. It is constructed of two hollow concrete cylinders and a steel platform and looks very similar to a large sea-based oil-drilling platform. Unbelievably, the 450 feet by 125 feet platform nation claims to be an independent country. See a photo at: <<http://www.fruitsofthesea.demon.co.uk/sealand/gallery.html>>. The Sealand government has their website at: <<http://www.sealandgov.com/>>. There is also another Sealand website at: <<http://www.principality-sealand.net/>> which is said to be a fake.

## The history of Sealand

Sealand has an interesting history. During World War II, the United Kingdom established a number of offshore military bases to defend England against German air raids. These sea forts housed enough troops to man and maintain artillery designed to shoot down approaching German aircraft and missiles.

One of these concrete and steel fortresses called "Roughs Tower" was located about seven sea miles from the English coast in the international waters of the North Sea ...more than double the then claimed three mile range of territorial waters. It was occupied by 200 British servicemen. After the war ended, the troops were withdrawn and the fortresses torn down. That is, all except Fort Roughs Tower. (In 1987, the UK extended their territorial waters to twelve miles offshore.)

From a legal point of view, (so the story goes) the



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deserted and abandoned island platform constituted extra-national territory. This paved the way for occupation. On September 2 1967 Paddy Roy Bates, a former English major, settled there with his family. One version has it that he seized Roughs Tower from the operators of Radio Caroline, a pirate broadcast station.

With skillful legal help, Roy Bates had the man-made island declared a conquered territory and his own private state. He bestowed the title of Prince Roy of Sealand upon himself ...his wife became Princess Joan.

Supposedly in 1968, the independence of Sealand was upheld in a British court decision where the judge held that Roughs Tower stood in international waters and did not fall under the legal jurisdiction of the United Kingdom. The Royal family and other loyal persons have occupied Sealand ever since ...for more than 30 years!

In 1975 the Sealand national Constitution was developed ...followed by the flag of the Principality of Sealand, a national anthem, and stamps. Gold and silver coins bearing Princess Joan's head (tied to the U.S. Dollar) were launched as Sealand Dollars. They made and enforced the laws of Sealand. At one point, Prince Roy tried to license a Florida group and others, to start radio and television broadcasting from Roughs Tower. The entire history of Sealand is steeped in controversy and "cloudy" information.

## Island "nation" leased to computer firm

In 1999, and with the health of the Royal family failing, the founders of HavenCo began negotiations to take over control of the country as the location of its secure servers and datacenter operations. Last year, a deal was finalized between the Royal Family and HavenCo to exclusively lease all the physical territory of Sealand. In effect, HavenCo, Ltd., which is registered in the Caribbean nation of Anguilla, purchased all Sealand "real estate" as the location for its secure computers. It will be connected with the outside world using satellite links.

Haven Co. is just that. A tax haven where (according to their website at <<http://www.havenco.com/>>) "...the customers' data will also be physically secure against any legal action." They offer "Advanced cryptographic protocols to support access control, financial transactions, and secure transaction backup." We understand that Linux servers will go for \$1,500 a month. The company says that it will not allow "spam" or "...content illegal in a given country to be hosted on co-located servers at HavenCo facilities within that specific country." Reportedly, the company plans to begin operations by this September.

Their management team has a background in Internet sports betting, tribal gaming and casino operation. MIT-trained Ryan Lackey an expert in cryptographic electronic cash handling is their Chief Technical Officer. HavenCo's Chief Logistics Officer is "Michael of Sealand." Michael, now 49 is the son of the reigning Prince Roy of Sealand whose age now approaches 80.

Michael has "...spent several years renovating and manning the Sealand fortress as well as arranging for all security and logistics. Michael has a good knowledge of firearms and is highly trained in combat shooting and small arms." That little bit of website information apparently means that the Principality of Sealand will be defended.

Customers are free to operate any type of business "pseudonymously or anonymously" within their limitations without officially registering for that type of business, HavenCo said. "We are currently raising our first round of funds from angel investors within the technology industry. ...We have nothing to hide, except the identity of our customers!" The entrepreneurs are said to be American.

We also heard that HavenCo - as a backup plan - is talking to other nations, probably ones in the Caribbean to convince them that becoming a data haven could be amazingly profitable.

Sealand, which claims "de facto recognition" by some Governments, is attempting to obtain a greater level of world recognition. It wants to have more of a real world nation status rather than being a strange legal curiosity. There has even been talk about "annexing" more land next to the island and setting up a sea-based casino.

In October 2000, the *Radio Amateur Association of the Principality of Sealand* was established. (But no one seems to know who formed it.) Its headquarters club ham radio station is 1SL1A. RAAPS' charter says it will represent Sealand in international amateur radio affairs, will attempt to obtain IARU and ITU membership and have Sealand added to the ARRL-DXCC list.

It was supposed to have been on the amateur airwaves from December 9 to 12, 2000, but the operation was postponed possibly because of the HavenCo., Ltd., deal. Theoretically, Sealand set aside 1SL2 call signs for reciprocal operation. The UK's Regulatory Agency (RA) even put out a Public Notice on the planned operation, then withdrew it. Is this all a hoax?

The 1SL prefix was fabricated since the ITU does not allocate any country prefixes beginning with the numerals: zero or one. Check out: <<http://www.1sl.org/>>. Sealand's website is hosted by "Nielsen.net" which is operated by Christian Nielsen K7CXN of Kaysville, Utah. He also claims to hold the call sign: 1SL1CXN.

It is no longer possible to develop a man-made country in the middle of the sea. A United Nations conference on the *Laws of the Sea* held in Montego Bay December 1982 agreed that a neighboring country is required to consent to the construction of any artificial island. Furthermore, the island must be dismantled and removed immediately after its intended use.

This is admittedly a bizarre story ...one that we have been following for some time. Most of it is confirmed and factual. We will just have to wait and see what happens. But it is getting difficult to separate fact from fiction. You can follow it by entering key words into a search engine.



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## CUTTING EDGE TECHNOLOGY

**C**ellphone "spam" coming! The FCC has mandated that by October 2001 wireless carriers must be able to locate callers who dial 911 for help. Now comes word that this tracking capability is about to be tapped for commercial use. Wireless advertisers and Web sites will be gathering and storing data about your interests while you are connected to the Internet. Don't be surprised if you are driving or walking near an outlet that sells products in which you have shown an interest and your cellphone rings. It could display a message like "From your Web-surfing log, it appears that you are in the market for Polo shirts." Then it will direct you to a nearby store to buy them on sale.

## EMERGING COMMUNICATIONS

**Y**ou have probably not heard much about GSM but look for it to proliferate in the U.S. Global System for Mobile (or GSM) communications is a world standard for digital cellular communications using narrowband TDMA (Time Division Multiple Access), which allows up to eight multiplexed (interleaved) calls at a time on 800 MHz and 1800 MHz frequencies.

GSM technology - which allows mobile users to roam to more than 168 countries making and receiving calls on one handset and with one global number - now accounts for more than 70 per cent of the world's digital mobile phones. Now ten years old, it is the standard most commonly used in Europe and Asia, but not in the United States.

More than a half billion GSM wireless phones are now in use worldwide. Most are in Europe and Asia. AT&T wireless is now installing a GSM overlay to its existing TDMA network. There are already more than 10 million GSM phones and a surge is expected in GSM usage across the USA.

## COMPUTER INFO

**I**ntant messaging (or IM for short) will be an even more powerful communications application than e-mail. So says researcher, the Gartner Group of Stamford, Conn.

Many web sites (including Yahoo,

Pow-wow, ICQ, Netscape and the Microsoft Network) have an "Instant Messenger" feature which allows users to determine when their friends are online so that they may type messages back and forth, voice chat or exchange files in real time ...either one-on-one or multi-party.

AOL Instant Messenger (AIM) allows users to create Buddy Lists that display when friends or family are currently connected and able to receive instant messages. America Online is the oldest and most popular with more than 50 million users. More than half of AOL subscribers use AIM. Millions of others who are not AOL subscribers have downloaded it free from: <[www.aol.com/aim/](http://www.aol.com/aim/)>. The latest version is AIM 4.3.

Microsoft is quietly working on a commercial enhancement (code named "Hailstorm") which will link IM to various Web services such as instant e-commerce, stock trading, purchasing and even corporate procurement in real time.

In five years, according to Gartner, 50 percent of businesses will rely on Instant Messaging services. "Right now, AOL has the marketing, but Microsoft has the 'Web services vision' and the technology."

Gartner says the number of IM users will reach 180 million worldwide by 2004. "...60 percent of all real-time online communication - voice or text - will be driven through instant messaging technology. ...Instant messaging will be the core of wireless e-commerce, live collaboration, virtual gaming and a host of other Internet applications."

More than 15 billion instant messages are already being sent each month and messaging is emerging as the "killer" wireless application. Gartner calls IM the "...electronic equivalent of the grade school pastime of passing notes in class." <[www.gartner.com](http://www.gartner.com)>.

## INTERNET NEWS

**S**tart of a trend? Supermarket tabloid, National Enquirer is testing a new method of distributing its gossip publication on the Web. Publisher American Media, Inc. says they will publish a digital version which will be delivered either by e-mail or file download. A special embedded security feature will prevent the file from being copied or forwarded to others. <[www.NationalEnquirer.com](http://www.NationalEnquirer.com)>

**T**he number of active sites on the

**World Wide Web is doubling every year!** So says Netcraft.com, a British outfit that collects unique host names and publishes the figures monthly. As of April 2001, worldwide there are 28,669,939 Web sites operating on the Internet.

A year ago (April 2000) there were 14,322,950 active sites. (April 1999: 5.0 million. April 1998: 2.2 million. April 1997: 1.0 million.) Survey information from Netcraft Ltd., Bath, England. <[www.netcraft.com/survey/](http://www.netcraft.com/survey/)>

**A**ccording to an Ottawa conference, the Web will run out of addresses by 2005. The current technology, Internet protocol version 4 (IPv4), supports just 4 billion addresses -- not nearly enough to cope with new cell phones, refrigerators and other devices that will be linked to the Internet and need addresses.

A new standard, Internet Protocol version 6 (IPv6), is being adopted in Europe and Asia, but cash-strapped North American network operators have little incentive to adopt the technology.

The IPv6 has a virtually limitless supply of addresses. Three quarters of the world's Internet Protocol addresses are currently located in North America. See: <[www.ipv6.org/](http://www.ipv6.org/)> (Reported by Reuters)

## WASHINGTON WHISPERS

**A**n aircraft that stays aloft all day, powered only by sunlight! NASA is demonstrating unmanned solar aircraft to show how they might be used commercially. In one scientific program, it is "parking" a Pathfinder-Plus high-altitude long-duration solar-powered aircraft above a Hawaiian coffee plantation so growers will know the best time to pick the beans.

The unpowered plane, basically one huge (120 by 12 foot) light weight (700 pound) wing with eight propellers, can fly at 100,000 feet with a top speed of only 20 miles per hour. Winds aloft often make the aircraft fly backwards! It will take color photographs that will yield precise information on when to harvest. Pathfinder can also be used to monitor storm developments over the ocean.

The Pathfinder-Plus, is built by AeroVironment Inc. of Monrovia, California, a little known high-technology firm that specializes in making unconventional flying machines. The company was founded by Dr. Paul MacCready who is its CEO. He has a personal webpage on AOL at <<http://members.aol.com/maccready/>>. His weird contraptions have caught the



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eye of the U.S. Government who have poured millions into his firm.

**A**nother NASA-funded application for long-duration aircraft includes acting as a sky-borne telecommunications platform without the time delay of a geostationary satellite.

AeroVironment has developed an unmanned, solar-electric airplane - called Helios - which will be capable of continuous flight for six months or more at 60,000 feet in the stratosphere, above the weather and commercial air traffic.

With this capability, the 250 foot wingspan Helios can provide a low cost, rapidly deployable, local access solution for broadband data and other high-potential telecommunications applications by overcoming the "last-mile" barriers facing conventional approaches.

Acting as a geostationary satellite without the time delay, a single airplane can "broadcast" to a service area of approximately 40 miles in diameter. Multiple aircraft can be positioned to create an airborne voice/data network.

**T**iny spies in the sky! AeroVironment also manufactures ultra small aircraft - some so small they fit in the palm of your hand - that can be sent on short military surveillance, law enforcement, and civilian rescue photo reconnaissance missions. The Black Widow, a U.S. Dept. of Defense financed project, is a six-inch, lithium battery-powered micro-air vehicle (MAV) with a small camera that flies for 22 minutes at speeds up to 43 miles per hour. The low-resolution, sugar-cube-sized video camera weighs less than a penny. The disc-shaped 4-ounce aircraft relays its images back to a laptop computer. Tiny spy planes is an idea that the Pentagon is spending million of dollars in developing to add to its arsenal.

See them all at: <[www.aerovironment.com/area-aircraft/unmanned.html](http://www.aerovironment.com/area-aircraft/unmanned.html)>.

## False e-mail rumor hits Australia.

The Australian Government found it necessary to issue a Public Notice on April 30th stating that Australian Internet users should disregard an e-mail claiming that Australia Post will charge a 5 cent fee for every delivered email. It said in part:

"Let me make it perfectly clear, there is no Bill 602P and the Government will not introduce legislation to charge for e-mails. This is a hoax that began in the United States and Canada in 1999 and has been circulating in Australia for the last few months. The Government made it quite clear in the 1997 Plan for Australian Industry, Investing for Growth that it 'will not introduce a 'bits' tax on the Internet' (i.e. there will be no tax based on the amount of information transmitted

across the Internet)."

A similar "Postal News" bulletin was released some time ago by the U.S. Postal Service <[www.usps.gov/news/press/99-99045new.htm](http://www.usps.gov/news/press/99-99045new.htm)> and the FCC: <[www.fcc.gov/Bureaus/Common\\_Carrier/Factsheets/nominate.html](http://www.fcc.gov/Bureaus/Common_Carrier/Factsheets/nominate.html)>

## AMATEUR RADIO

**S**pace tourist, Dennis Tito KG6FZX was given access to the International Space Station's ARISS amateur radio equipment on a "non-interference basis" - meaning that he must not interfere with the crew's work or sleep schedules. On May 1<sup>st</sup>, the day after arriving on the ISS, Tito radioed his son while over Hawaii which was phone patched into California. He used the call sign NA1SS. Tito also made other random ham radio contacts as well.

**F**ollowing discussions between the Radio Communications Agency (RA) and the Radio Society of Great Britain (RSGB), additional 2-meter and 70-cm frequencies have been granted to UK radioamateurs with which to link ham radio to the Internet. To link to the Internet, Amateurs must apply for a Notice of Variation which now can be done online via the RSGB Datacomm Committee (DCC) website.

UK amateurs use the Internet to network digital mailboxes, analog FM Voice Repeaters and simplex voice gateways. Non-Amateur users may not be connected to Amateur Radio services over the Internet. Details at: <[www.dcc.rsgb.org](http://www.dcc.rsgb.org)> - Click on the "Internet Linking" Section.

**T**hailand reduces Morse code exam to 5 wpm. The Royal Amateur Society of Thailand (RAST) reports that the Thai Post Telegraph Department (PTD) announced that effective April 20<sup>th</sup>, the Morse code examination speed has been reduced to 5 wpm (Words Per Minute).

There are three Amateur Radio grades in Thailand. Novice (VHF only), Intermediate (VHF - 10 watts, plus 7, 14, 21 and 28 MHz - 200 watts), and Advanced (VHF plus 500 watts on HF). Thailand does not yet have the HF WARC 79 bands.

The Intermediate license previously required passing a Morse code test at 8 wpm, while the Advanced included 15 wpm Morse proficiency. A change in the technical test content is also expected in the next examinations scheduled for November 2001. An English version of the RAST website can be found on the World Wide Web at at: <[www.qsl.net/rast](http://www.qsl.net/rast)>.

The regulations concerning bringing in ham radio equipment to Thailand has also been relaxed. As of April 9<sup>th</sup>, the PTD is allowing licensed radioamateurs to bring their own equipment with them to Thailand providing they have three documents:

- (1.) A copy of a catalogue showing the specific transceiver,
- (2.) copy of the technical specification of the specific transceiver and
- (3.) certificate from a standards organization confirming that the transceiver complies with the documented specification.

Previously, it was illegal to possess Amateur Radio equipment in Thailand without a transceiver import permit. The gear also had to be inspected by the PTD and registered prior to use. (Thanks, Fred Laun, K3ZO.)

## FCC Amateur Radio Enforcement

**J**ose M. Chavez KE4ZUD (Homestead, FL) had his Extra Class license downgraded to General in Nov. 1999. He has been monitored operating outside of the General Class bands in Oct. and Dec. 2000 and again in Jan. 2001. The FCC has given Chavez a final warning that continued operation outside of the authorized General Class bands will result in license revocation and a \$7,500 fine.

**J**ohn A. Lupinski WB2PAG (Maywood, NJ) is being asked to explain his justification for holding the K4LIB club call sign assigned to the "Arthur Godfrey Fan Club" in 1997. Lupinski is the trustee. K4LIB was Godfrey's personal ham station call. FCC also requested club membership and meeting information.

**L**ester M. Killingsworth KE6WSC (Hollywood, CA) has been advised by the FCC that it expects him to stay off of the K6UQ repeater system as requested by the control operator. "...failure to do so will jeopardize your license which may include revocation," FCC warned.

**J**ose Ramon Santos KB2OPM, (Canovanas, PR) has been asked to contact the FCC concerning his alleged operation on 26.555 MHz, a "...frequency not authorized under your license or in the CB service."

**C**larance R. Miller N0PKZ (Luverne, MN) has been asked to provide more information about his repeater operating on 147.075 MHz. It was alleged that his system "...fails to identify, locks on transmit without timing out, transmits squeals on the output frequency and interferes with another repeater system." The FCC wants to know the methods used to control the repeater, the configuration of the system and whether the N0PKZ repeater system is linked. A response is required within 20 days.



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## CANADA BOARDS THE 5 WPM MORSE CODE BANDWAGON

Canadian telecommunications regulator, *Industry Canada* has now dropped the Morse code requirement for Canadian radioamateurs to 5 words-per-minute effective May 19, 2001. This action follows their Gazette Notice (similar to our NPRM) No. DGRB-001-01 — "A Proposal to Grant Full Operating Privileges in all Amateur Radio Frequency Bands Below 30 MHz to Amateur Radio Operators Holding a 5 word per minute (w.p.m.) Morse Code Qualification" released last summer.

Canadian amateurs may now operate on the following HF bands with full privileges after passing the "Basic" (radio theory) qualification and a 5 words-per-minute Morse code test.

| Wave-length  | Frequency Band      | Maximum Bandwidth* |
|--------------|---------------------|--------------------|
| 160 Meters   | 1.800 - 2.000 MHz   | 6 kHz              |
| 75/80 Meters | 3.500 - 4.000 MHz   | 6 kHz              |
| 40 Meters    | 7.000 - 7.300 MHz   | 6 kHz              |
| 30 Meters    | 10.100 - 10.150 MHz | 1 kHz              |
| 20 Meters    | 14.000 - 14.350 MHz | 6 kHz              |
| 17 Meters    | 18.068 - 18.168 MHz | 6 kHz              |
| 15 Meters    | 21.000 - 21.450 MHz | 6 kHz              |
| 12 Meters    | 24.890 - 24.990 MHz | 6 kHz              |
| 10 Meters    | 28.000 - 29.700 MHz | 6 kHz              |

**\* Note: There are no emission sub-bands in Canada. Any modulation scheme may be used on any band subject only to minimum occupied bandwidth**

Authorized transmitter power level is 250 W direct-current input power or 560 W peak envelope power for single sideband transmitters. This power level increases to 1,000 W DC input power (2,250 W PEP on SSB) for radioamateurs who additionally pass the "Advanced" theory qualification.

Industry Canada said they had received a number of petitions from individuals contending that the previous 12 words-per-minute Morse examination speed requirement could no longer be justified. The issue of the Morse code requirement was brought up last April during a meeting of the *Canadian Amateur Radio Advisory Board* by Radio Amateurs of Canada Inc. (RAC), the national association representing Canadian amateurs. A formal proposal to eliminate the 12 w.p.m. Morse code requirement in order to grant amateurs full HF operating privileges below 30 MHz was received by Industry Canada in a letter from RAC dated June 15th, 2000.

In that letter, the RAC noted that "...this proposal would give Canadian radio amateurs operating privileges similar to those currently accorded to United States amateurs who successfully pass a 5 w.p.m. Morse test." RAC also emphasized the "...ongoing debate in the Amateur

Radio community concerning the validity of the retention of the international radio regulations' requirement for Morse Code competency for operation below 30 MHz, given the removal of Morse for international maritime communications and its declining use by government and military organizations.

The letter also pointed out that "RAC had consulted with the Canadian Amateur Community [and] that a majority of Canadian Amateurs are supportive of dropping the 12 w.p.m. test."

"The decision by Canada to reduce the Morse code qualification is consistent with what is happening in other parts of the world," Industry Canada said "...and will simplify the process of implementing reciprocal operating agreements for Canadian amateurs with other administrations."

The new rules are contained in *Radiocommunication Information Circular 2 (RIC-2)*, "Standards for the Operation of Radio Stations in the Amateur Radio Service." A copy can be found on the Industry Canada web site at: <http://strategis.gc.ca/SSG/sf01226e.html>

• **The May 11<sup>th</sup> Rocky Mountain News tells about a 16-year-old boy using a handheld radio** and a computer to dispatch Denver police cruisers and a helicopter to fake emergencies and calling officers off legitimate 911 calls for more than a month before getting caught.

Police said the teen "hacked" into the police dept's computer-controlled radio system and programmed his radio to transmit on the police frequency from his southwest Denver home. He also used the alias of Jerry Martinez, a fictitious Denver police officer "...more than a dozen times from March to May, including a March 19 call for backup that sent patrol cars speeding with lights and sirens to the scene of a non-existent crash," the newspaper said. He told the dispatcher that he was following the suspect at a high rate of speed.

Detectives found their suspect with the help of agents from the Federal Communications Commission and arrested him on May 1. The teen was charged with a dozen felony and a dozen misdemeanor crimes involving wire tapping, eavesdropping and telecommunications fraud. He is being held at a youth detention facility.

The young man had a recent history of radio-related violations. On April 6<sup>th</sup>, the teenager dressed in a Denver police jacket and driving a truck equipped with emergency lights and his radio attempted to pull a man over. The man refused, drove to his home and had a neighbor call police. The teen was later arrested.

On April 26<sup>th</sup>, the same teen allegedly called dispatch requesting information on three license plates, but this time police were ready for him. He was kept on the radio for an extended period while an FCC agent used special tracking equipment which led to the teen's house. The agent confiscated nine radios from his home.



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## Dayton HamVention -- Continued from Page 3

expects to be involved in a number of pending and future proceeding that will effect you."

- "On December 15, 2000, the ARRL filed an application for review pending of a Bureau order. The Order denied the ARRL's request to extend PRB-1 to include additional private land use restrictions that affect your antennas. Action on the application for review is pending."

- "Kenwood Communications Corporation has filed a petition for rulemaking asking that auxiliary stations be permitted to transmit on channels in the 2M band, except segments used for SSB, CW, and satellite operation. The petition has not received a RM number yet."

"It results from our denial of Kenwood's request last summer that we declare its Sky Command system complies with the Amateur Radio Service Rules. As you may recall, we concluded any licensees that used 2M as part of the Sky Command system would be in violation of the rules."

- "Restructuring operator privileges is another proceeding that will be coming up within the next year or so -- a couple of years at the most. Given the changes in the licensing requirements, the simplification of the license structure that occurred last year, and the way licensees responded to those changes, changes in operating privileges for the different classes of operator licenses are inevitable.

"The *Report and Order* considered whether changes in operating privileges should be undertaken at that time. It concluded that simplification of the license structure was independent of a comprehensive restructuring of operating privileges. The Commission also determined that the amateur service community should have an opportunity to discuss and possibly reach a consensus regarding implementation of new technologies before restructuring the amateur service operating privileges and/or frequencies.

"In the MO&O released last month the Commission said it believed that it should allow the amateur service community to reach a consensus regarding a comprehensive restructuring of operating privileges for all licensees before we expend our resources in a proceeding addressing this matter. ...

"Before any of you spend any more energy on this topic, I want to summarize what the Commission has indicated it wants to receive before it spends the taxpayer's money on a proceeding to change operating privileges. The hand writing is in the past decisions. Here it is:

1. Implementation of new and more modern communications technologies before restructuring operating privileges;
2. Proposal must include all licensees, all bands;
3. You all need to reach a consensus regarding this

topic before we expend our resources.

"What we don't want, and we don't have the resources to do, is multiple proceedings that address piecemeal changes in operating privileges for only certain classes of licensees or certain bands. You collectively need to reach agreement on how you want to use your spectrum. You all don't want me recommending to the Commission what your operating privileges should be."

- "Another conference that may have a huge future impact on amateur radio is WRC 2003. This is scheduled for June, 2003, probably in Caracas, Venezuela. WRC-2003 is going to take a top-to-bottom look at Article S25. This article includes some of the international rules that apply to ham radio. Most groups have accepted that suppression of the Morse code proficiency requirement in Article S25 is likely to occur at WRC 2003. That would leave a Morse code proficiency requirement as a domestic option for each country to decide whether to retain."

- "Other changes that may be considered concern harmonization of a world allocation for ham radio around 7 MHz and call sign formation (all of these call signs that have multiple numerals in then like we had for the Olympic Games in Atlanta are not quite in harmony with the Radio Regs).

"Other questions concern whether the ITU should get rid of the prohibition on third party communications and the banned country rule. There is a lot more to WRC-2003 than just S25.5, the telegraphy requirement for operation below 30 MHz, but that seems to be causing most of the smoke.

"Keep in mind, too, that WRC-03 changes may not become effective for many years. The 7 MHz issue, for example, may not translate into what you don't hear or what you can do on the air for 5-10 years, at a minimum."

- "I expect that 5 minutes after the Senate ratifies the WRC-03 treaty agreements, we will receive a petition for rule making from somebody asking that the 5 words-per-minute telegraphy examination requirement be eliminated from Part 97. Look for a battle among yourselves again on Morse code proficiency as a licensing requirement in about 3 years."

- "Lastly, keep your eye on legislation that has been introduced on Capital Hill. There is the *Spectrum Protection Act*, HR 817 and S 549, that the ARRL is pushing.

"There are bills that may effect using radios while driving. The *National Highway Traffic Safety Administration* seems to be the lead agency on this one. It wants more states to collect data on driver distractions as part of crash report forms. NHTSA said only about 20 states now collect such information and only a handful provide such detail as whether a driver was using a wireless phone.



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"And there is talk about other revisions to the *Telecommunications Act of 1996*. Some or all of these bills may effect you, either directly or inadvertently. State legislatures are busy with PRB-1 and driving-while-cellular type bills. These also may effect you."

- "The vanity call sign system has issued tens of thousands of vanity call signs since it started in 1996. The bulk of the applications are coming in electronically.

"The applications show that there has been no let up in your creativity when it comes to arranging letters and numbers and gaming the system. Most are non-controversial, appropriate, or funny. Initials are still very popular.

"Some of you are asking for call sign formats that we don't have, such as 1x4s. I can predict what the result of these applications will be—they will be dismissed. Some licensees are picking combinations of letters and numbers that other licensees find objectionable. Other licensees are letting us know they don't like some of the choices.

"The site that Michael Carroll has, N4MC.com, is about the most comprehensive vanity call sign site I have found. If you are interested in vanity call signs, I recommend it to you. You may end up saving yourself some disappointment and \$12.00 or \$14.00.

"Speaking of vanity call signs, the Commission released a its annual fee *Notice of Proposed Rule Making* recently. It proposes to reduce the fee for vanity call sign applications to \$12.00. The final fee may be different. If adopted, the new fee would become applicable when the new fee schedule becomes effective. The fee you pay is based on the date your application is filed with the Commission, not the date you mailed it, gave it to FedEx, or told FedEx to deliver it.

Believe it or not, I'm out of things to talk about. You all have been a great audience."

- "Before we get to your questions, we are very fortunate to have with us again this year the fellow you all came to see and honor again, Riley Hollingsworth, K4ZDH. Contrary to what some of you believe, he really does exist. "With the creation of the Enforcement Bureau, the Commission employee formerly known as 'Riley - the Enforcer,' became Riley: the Special Counsel for Amateur Radio Enforcement."

- Hollingsworth said that Amateur Radio enforcement will continue. "There will be more of the same under the new Commission headed up by Mike Powell. He has a military orientation and the son of a 4-star General doesn't put up with a lot of crap," Riley commented.

- "Complaints are dropping down," Riley said. "And I have been asked about what I am worrying about these days. I am particularly concerned about three things.

- 1.) California (many difficulties there ...especially repeater problems. He especially singled out the

W6NUT repeater.)

- 2.) Stupidity on the air ("You can't regulate stupidity." and;

- 3.) Ten meter unlicensed operation (...much of it off-shore and 'freebanding' between CB and 28 MHz.)

Hollingsworth reminded the Amateur community that "your bands are worth billions" and that you "should be concerned about how you sound on the bands." At this point, Riley played some tape recordings to the audience of some less than desirable Amateur Radio QSOs. Everyone agreed that this sort of operation has the potential to hurt the Amateur Radio Service ...especially at a time when other services need more spectrum.

He particularly mentioned the need for more air traffic control frequencies which currently extend from 108 to 137 MHz just below the Amateur 2-meter band. He distributed a recent newspaper article that appeared in a recent issue of the *Washington Post*.

It talked about how "The radio airwaves that pilots and air traffic controllers use to communicate are nearly filled to capacity, threatening the ability of the aviation system to expand to meet growing demand for air travel."

"The lack of radio frequencies is quickly becoming as important a factor in aviation congestion as the lack of runways and limited air space."

"Moreover, technological advances to increase the system's ability to handle more communications are not expected to come soon enough to prevent the even greater crunch of delays and cancellations that will occur when all of the FAA's radio frequencies are being used to the maximum extent possible. ..."

"It is impossible to overstate the seriousness of this problem," the FAA said. "Radio is the lifeblood of aviation control." VDL-3 (for VHF data link, mode 3) - the next generation digital plan - "...which the FAA has dubbed 'Nexcom' will take a minimum of nine to 12 years to develop, test, certify and implement, and some aviation officials believe it would take even longer." American Airlines said they could not wait ten years and "...a near term solution is needed."

Another *Washington Post* article that Riley distributed headlined "\$16.9 Billion Bid at Airwave Auction. ...The total was more than triple some early estimates and the latest sign of intensifying demand for radio frequencies as mobile-telephone services spread."

Hollingsworth also commented on a recent *CQ Magazine* article entitled "Cleaning Up Our Act." One of the paragraphs said "I believe one has the obligation, at all times, to speak on ham radio in a manner suitable for all mixed company, including women and children."

In summing up the looming battle for more radio spectrum, Riley added, "Without a national approach, you are a 'sitting duck.' It is very important to have a national voice. You can't survive without it."